

LISTING OF THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-61. (Cancelled)

62. (Previously Presented) A filler neck assembly comprising:

a funnel member having a tubular body defining a larger inlet opening, a smaller outlet opening, and a transition portion disposed between the inlet opening and the outlet opening; and

a nozzle receptor disposed within the tubular body and operable to position a nozzle relative to the transition portion such that fuel from the nozzle is directed toward the transition portion to induce a swirl to and vent vapors from fuel flowing through the tubular body.

63. (Previously Presented) The filler neck assembly of Claim 62, further comprising a sealing surface formed of the tubular body about the inlet opening.

64. (Previously Presented) The filler neck assembly of Claim 63, wherein the inlet opening is rolled over to create the sealing surface.

65. (Previously Presented) The filler neck assembly of Claim 62, wherein the outlet opening is barbed.

66. (Previously Presented) The filler neck assembly of Claim 62, further comprising a hose bead formed about the outlet opening.

67. (Previously Presented) The filler neck assembly of Claim 62, further comprising a hose, wherein the outlet opening is attached to the hose.

68. (Previously Presented) The filler neck assembly of Claim 67, further comprising a vent hole formed on the tubular body.

69. (Previously Presented) The filler neck assembly of Claim 68, further comprising a vent tube connected to the tubular body about the vent hole.

70. (Previously Presented) The filler neck assembly of Claim 69, further comprising a fuel tank, the vent tube and the hose connecting the tubular body and the fuel tank.

71. (Previously Presented) The filler neck assembly of Claim 62, wherein the nozzle receptor is disposed proximate to the inlet opening.

72. (Previously Presented) The filler neck assembly of Claim 62, further comprising a hose and a fuel tank, the hose connecting the outlet opening and the fuel tank.

73. (Previously Presented) The filler neck assembly of Claim 72, wherein the transition portion includes an elliptically-shaped junction between a first portion of the tubular body including the inlet opening and a second portion of the tubular body includes the outlet opening.

74. (Previously Presented) The filler neck assembly of Claim 73, wherein the elliptically-shaped junction lies on a plane inclined at an angle to an axis of at least one of the inlet opening and outlet opening.

75. (Previously Presented) The filler neck assembly of Claim 62, wherein the inlet opening has a diameter D_1 , the outlet opening has a diameter D_2 , and D_1 is at least one and a half times D_2 .

76. (Previously Presented) The filler neck assembly of Claim 62, wherein the funnel member is seamless and is formed from a single piece of material.

77. (Previously Presented) The filler neck assembly of Claim 62, wherein the inlet opening and outlet opening are axially offset.

78. (Previously Presented) A method of forming a filler neck for a motor vehicle fuel tank comprising:
forming a funnel member;

forming a relatively large inlet at one end of the funnel member, the inlet having a first axis;

forming a relatively small outlet at the opposite end of the funnel member, the outlet having a second axis offset from the first axis;

configuring a transition portion of the funnel member between the inlet and outlet; and

forming a nozzle receptor within the funnel member that positions a nozzle relative to the transition portion such that fuel from the nozzle is directed toward the transition portion to induce a swirl to and vent vapors from fuel flowing through the funnel member.

79. (Previously Presented) The method of Claim 78, further comprising:
cutting a length of tubing to form a hose of desired length; and
telescopically joining an end of the hose to the outlet of the funnel member.

80. (Previously Presented) The method of Claim 79, further comprising:
attaching the nozzle receptor to the funnel member adjacent the inlet.

81. (Previously Presented) The method of Claim 78, further comprising rolling over an edge of the inlet to the funnel member.

82. (Previously Presented) The method of Claim 78, further comprising forming a vent hole in the funnel member.

83. (Previously Presented) The method of Claim 82, further comprising connecting a vent tube about the vent hole and in communication with a fuel tank.

84. (Previously Presented) The method of Claim 78, further comprising connecting the funnel member and a fuel tank via a hose.

85. (Previously Presented) The method of Claim 78, further comprising applying an anticorrosive coating to the funnel member.

86. (Previously Presented) The method of Claim 78, wherein the configuring the transition portion includes forming an elliptically shaped junction between a first portion of the funnel member including the inlet and a second portion of the funnel member including the outlet.

87. (Previously Presented) The method of Claim 86, wherein the forming includes forming the elliptically shaped junction on a plane inclined at an angle to an axis of at least one of the inlet and outlet.

88. (Previously Presented) The method of Claim 78, wherein the configuring includes forming the inlet with a diameter D_1 and an outlet with a diameter D_2 , wherein D_1 is at least one and one-half times D_2 .